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# Cibo e nutraceutici: direzione salute

3° Convegno a cura delle Piattaforme Tematiche di Ateneo su “Alimenti e Nutrizione” e “Salute Umana e Animale”

**Camerino 10 luglio 2018**

Auditorium Benedetto XIII - via Le Mosse - Colle Paradiso

ore 9.00 Registrazione dei partecipanti

ore 9.20 Saluto della autorità ed inizio dei lavori

## PLENARY LECTURES

09.40 *Nutraceutica: tra finzione e realtà.* **Francesco Di Piero**,  
Scientific & Research Director, Velleja Research

## Comunicazioni orali

10.10 *Nutrition, gut and inflamm-aging.* **Paolo Orlandoni**

10.25 *Obesity related end-organ damage: protective effects of tart cherries supplementation.* **Daniele Tomassoni**

10.40 *Nutritional treatment in lymphedema.* **Giacomo Pagliaro**

10.55 *Coffee break*

11.30 *Recovery of bioactive products from industrial hemp (Cannabis sativa L.) waste: CBD-rich essential oils and eco-friendly biopesticides.* **Filippo Maggi**

11.45 *Put the pot in the soup. “cannabis diet” in metabolic disorders.* **Massimo Nabissi**

12.00 *p62/Sequestome1-engineered Lactobacilli as biotherapeutic agents in AD.* **Laura Bonfli**

12.15 *Insulin modulation through Nutraceutical Supplementation to control neuroendocrine and cognitive conditions in the adult patient.* **Alberto Garoli**

12.30 *Effects of thermal and physical treatments on donkey milk nutritional properties.* **Silvia Vincenzetti**

12.45 *Effects of different nutritional strategies in post exercise recovery.* **Giorgia Vici**

13.00 *Seafarer’s knowledge and awareness of the risk represented by food handling.* **Iolanda Grappasonni**

13.15 *Sessione poster e light lunch*

## PLENARY LECTURE

15.00 *Cereal fermentation in a nutritional perspective.*

**Marzia Innocenti**, Professore associato di Chimica degli Alimenti,  
Università di Firenze

## Comunicazioni orali

15.30 *Chemical compositional peculiarities and functional properties of monovarietal extra virgin olive oils from Marche Region.*

**Dennis Fiorini**

15.45 *Characterization of table olives from “Piantone di Mogliano” cultivar: proteomic studies and antioxidant properties evaluation.*

**Ambra Ariani**

16.00 *EU project GRAFOOD: Active GRAphene based FOOD packaging systems for a modern society.* **Stefania Silvi**

16.15 *Food packaging: antimicrobial activity of Novel Composite Plastics.* **Stefania Scuri**

16.30 *Coffee break*

17.00 *Nutritional aspects of rice starch composition: the effect of cooking methods.* **Diego Perinelli**

17.15 *Preservation of cheese quality: evaluation of food packaging efficiency through the monitoring of free fatty acids and hexanal by HS-SPME-GC-MS.* **Franks Kamgang Nzekoue**

17.30 *Development of a new extraction method for the quantification of lignans in espresso and roasted and ground coffee by HPLC-MS/MS triple quadrupole.* **Simone Angeloni**

17.45 *Particle size distribution influences on Espresso Coffee extraction.* **Gulzhan Khamitova**

18.00 *Chiusura dei lavori*

## Segreteria Organizzativa:

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## Comitato Scientifico:

Amenta Francesco, Amici Augusto, Cerquetella Matteo, Ciccocioppo Roberto, Favia Guido, Gabbianelli Rosita, Polzonetti Valeria, Sagrati Gianni, Vittori Sauro.

Verrà assegnato un 1 CFU agli studenti delle Scuole di Scienze del Farmaco e dei Prodotti della Salute e di Scienze e Tecnologie (LM-54, L-32/34).

## Comitato Organizzatore:

Caprioli Giovanni, Cerquetella Matteo, Marchegiani Andrea, Sagrati Gianni.

## In collaborazione con:

Area Comunicazione Ufficio Stampa e Marketing di UNICAM.



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## Sessione Poster

- 1. Oral administration of probiotics and immunomodulation with Bacillus Calmette-Guérin as a novel therapeutic strategy in Alzheimer's disease**  
Laura Bonfili, Valentina Cekarini, Sara Berardi, Silvia Scarpona, Livio Galosi, Massimiliano Cuccioloni, Mauro Angeletti, Giacomo Rossi and Anna Maria Eleuteri
- 2. Improved intestinal permeability and increased fecal butyrate content in an animal model of Parkinson's disease treated with an electrolyzed-reducing water**  
Laura Bordoni, Donatella Fedeli, Dennis Fiorini, Rosita Gabbianelli, Cinzia Nasuti
- 3. Antioxidant and antiproliferative activities of different varieties of cauliflower (*Brassica oleracea var. botrytis*) after cooking processes**  
Massimo Bramucci, Greta Veronica Badillo Pazmay, Luana Quassinti, Cristina Marchini, Nazzareno Acciarri, Emidio Sabatini, Cristina Andreani, Caterina Bartolacci, Antonino Miano, Augusto Amici, Giulio Lupidi
- 4. A new extraction method to quantify polyphenols in green coffee using HPLC-MS/MS triple quadrupole**  
Serena Galdenzi, Simone Angeloni, Giovanni Caprioli, Luciano Navarini, Gianni Sagratini, Sauro Vittori
- 5. Fecal microbiota differences in canine lymphoma treated with chemotherapy and probiotics**  
Alessandra Gavazza, Giacomo Rossi, George Lubas, Matteo Cerquetella, Jan Suchodolski
- 6. Sensory and microbiological assessment of foods stored in packaging from different European countries**  
Xiaohui Huang, Gianni Sagratini, Stefania Silvi
- 7. A proteomic study on the effect of polyphenolic extract from extra-virgin olive oil on a yeast model of aging**  
Stefania Pucciarelli, Valeria Polzonetti, Dennis Fiorini, Daniela Micozzi, Yusufu Rozimaimaiti, Silvia Vincenzetti
- 8. Impact of spermidine consumption on aging: metabolic, morphological and cognitive aspects**  
Benedetta Moreschini, Daniele Tomassoni, Valeria Polzonetti, Silvia Vincenzetti, Augusto Amici, Cinzia Nasuti, Luca Tiano, Patrick Orlando, Ilenia Martinelli, Stefania Pucciarelli
- 9. In vitro study of potential prebiotic properties of extra virgin olive oils from Marche region**  
Chiara Salvesi, Maria Magdalena Coman, Dennis Fiorini, Stefania Silvi
- 10. Possible protective mechanism of choline alphoscerate in brain of spontaneously hypertensive rats as model of cerebrovascular disease**  
Seyed Khosrow Tayebati, Ilenia Martinelli, Michele Moruzzi, Enea Traini, Francesco Amenta, Daniele Tomassoni
- 11. Gliosis related to metabolic syndrome: evidences in obese zucker rat brain**  
Daniele Tomassoni, Ilenia Martinelli, Michele Moruzzi, Maria Vittoria Micioni di Bonaventura, Francesco Amenta, Seyed Khosrow Tayebati
- 12. Functional foods as healthy choice: are consumers aware?**  
Giorgia Vici, Laura Malandrino, Leonardo Cesanelli, Luca Belli, Valeria Polzonetti

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## **Fecal microbiota differences in canine lymphoma treated with chemotherapy and probiotics**

**Alessandra Gavazza<sup>1</sup>**, Giacomo Rossi<sup>1</sup>, George Lubas<sup>2</sup>, Matteo Cerquetella<sup>1</sup>, Jan Suchodolski<sup>3</sup>

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The intestinal microbiota of dogs consists of bacteria, fungi, *archaea*, viruses and protozoa, and intestinal bacteria have been implicated in several types of cancer [3-7]. Animal models play a key role in understanding the importance of gut microbiota composition in immune system development, and its relation with health and disease. Microbes can influence immune cells directly, indirectly, or both, and led to an increased lymphocyte proliferation with a higher chance of aberrant DNA replication, particularly in some B lymphocytes which are innately vulnerable to genetic instability and activation. Also oxidative stress caused by intestinal microbiota, either directly or indirectly through the immune system, can affect tumorigenesis, thus, the microbiota can affect several pathways associated with lymphomagenesis [7]. The optimal responses to cancer therapy require an intact commensal microbiota that mediates its effects, by modulating myeloid derived cell functions in the tumour microenvironment [1]. A recent study showed significant differences in the microbial communities of dogs presenting with multi-centric lymphoma compared to healthy control dogs [2].

In our study design we analysed the microbiome (by using 16S rRNA gene Illumina sequencing and qPCR assays) of naturally voided fecal samples from 12 healthy dogs, 12 lymphoma affected dogs before (pre) and after (post) induction phase (8 weeks) of chemotherapy (cyclophosphamide, vincristine, and prednisolone) plus probiotics (*B. clausii* or *S. thermophilus*, *L. acidophilus*, *L. plantarum*, *L. casei*, *L. helveticus*, *L. brevis*, *2B. lactis*).

All dogs were affected by B cell lymphoma, generalized lymphadenopathy form (multicentric), stage III or IV (WHO clinical staging for lymphoma) without systemic signs. Animals selected were not showing any additional clinical signs of significant disease, and were in good general conditions. None of the dog showed any gastrointestinal signs in the previous two months, and none received antibiotics within at least the previous 2 months before fecal sample collection.

Several statistically significant data were observed comparing the fecal microbiome of healthy dogs vs lymphoma dogs before and after chemotherapy plus probiotics. In particular, higher concentrations in healthy dogs compared to lymphoma dogs were observed for *Faecalibacterium* (P<0.001, healthy vs pre and post chemotherapy) and *Turicibacter* (P< 0.01 healthy vs post chemotherapy). On the contrary, the concentration of *E.coli* (P< 0.01) and *Streptococcus* (P<0.05) was higher in lymphoma dogs post chemotherapy compared to healthy dogs.

In conclusion, this study showed significant differences in the fecal microbial communities of dogs presenting with multi-centric lymphoma undergoing chemotherapy compared to healthy dogs but not between microbiota pre vs post chemotherapy. In order to understand microbiome's changes in

lymphoma affected dogs treated with standard protocol plus probiotics, a larger number of patients and stool samples, before and after treatment, should be investigated.

## References

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